

REMARKS

IN THE DRAWINGS

The Examiner objected to the drawings. The Examiner stated that Figures 5, 6 do not provide alphanumeric tags describing the elements of the present invention. Red-lined copies of the corrections to the Figure 5 and Figure 6 are included.

IN THE CLAIMS

Claim 1 was objected to because the Examiner stated that claim 1 included an informality. The Examiner suggested changing "comprising" to --comprises--, in line 6. Claim 1 has been amended to include this change.

Claims 4-7 were rejected under 35USC112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4-7 have been amended to address the antecedent problem.

Claims 1-9 were rejected under 35USC102 as being anticipated by Hudson. Applicants strongly disagree with the rejection.

Amended claim 1 includes the following features:

- a base transceiver station cluster, the base transceiver station cluster comprising:
 - a first plurality of base station transceivers; and
 - a plurality of common channel areas, each common channel area having a unique set of common assigned channels;
- each common channel area comprising at least one subscriber unit, each subscriber unit within the common channel area receiving and recovering information signals from a second plurality

of base station transceivers through one of the set of common assigned channels that correspond to the common channel area.

(Emphasis added)

The claimed invention (as supported in the specification page 8, lines 3 through page 11, line 2) includes a cellular reuse system that includes each subscriber unit within the common channel area receiving and recovering information signals from a second plurality of base station transceivers.

Each subscriber unit within the common channel area receives and recovers information signals from a plurality of base station transceivers provides spatial multiplexing and diversity communication (page 11, lines 10-12). Additionally, as pointed out on page 13, lines 5-7, multiple signals as provided by spatial diversity, and spatially processing the signals received by multiple antennae allows for improved interference canceling techniques.

In contrast, Hudson includes a cellular communication system in which a mobile unit only receives and recovers an information signal from a single base transceiver station. The sections the Examiner referred to within Hudson (col 1 lines 31-37, col 2 lines 34-40) clearly describe the signals of other base transceiver stations as being “unwanted (interfering) base site,” and creating co-channel interference. There is no way to construe the information signals of the claimed invention that are received and recovered as being equivalent to the unwanted signals caused by co-channel interference of Hudson.

Unlike the claimed invention, the single information signal of Hudson does not provide for spatial multiplexing, communication diversity, nor does Hudson provide the improved interference canceling techniques provided by multiple antennae.

Additional Comments regarding obviousness

Additionally, it would not be obvious to combine Hudson with the cited prior art to yield the claimed invention for the following reasons.

1. All claim limitations must be considered especially when missing from the prior art.

The claimed invention includes:

a plurality of common channel areas, each common channel area having a unique set of common assigned channels;

each common channel area comprises at least one subscriber unit, each subscriber unit within the common channel area receiving and recovering information signals from a second plurality of base station transceivers through one of the set of common assigned channels that correspond to the common channel area.

The mere absence [from the reference] of an explicit requirement [of the claim] cannot reasonable be construed as an affirmative statement that [the requirement is in the reference]. *In re Evanega*, 829 F.2d 1110, 4 USPQ2d 1249 (Fed. Cir. 1987).

Hudson teaches a cellular reuse communication system in which a mobile unit only receives and recovers information signals from a single base transceiver station. None of the above-described advantages of the invention are provided by Hudson.

Roy, III et al. teaches SDMA from a single base transceiver station. Roy does not teach multiple base transceiver station transmitting information signals to subscriber units in a cellular reuse system.

Additionally, Schmidt et al. does not teach each subscriber unit within a common channel area receiving and recovering information signals from a second plurality of base station

transceivers through one of the set of common assigned channels that correspond to the common channel area.

2. There is no suggestion in the prior art to modify it such as to produce Appellant's claimed invention.

"The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 23 USPQ2d 1780, 1783 (CAFC 1992); see also, *In re Gal*, 25 USPQ2d 1076 (CAFC 1992); *In re Jansson*, 203 USPQ 976 (CCPA 1979).

There are differences between the Applicant's claimed invention and the teachings in the Hudson, Roy, III et al and Schmidt et al. patents. For none of the differences does Hudson, Roy, III et al and Schmidt et al. patents suggest the required modifications.

The Examiner stated that Hudson discloses a cellular wireless channel re-use system, that Roy states that spatial multiplexing offers improved transmission quality and that Schmidt discloses that it is useful for a base station and mobile station to allow transmitter and receiver diversity. However, none of the references suggest the desirability of being combined with any of the others.

A 35 U.S.C. §103 rejection presumes the existence of differences between the subject matter claimed and the teachings of the prior art. Otherwise a rejection under 35 U.S.C. §102 would have sufficed. Thus, the Examiner must be able to point to something in the prior art that suggests in some way a modification of a particular reference or a combination with another reference in order to arrive at the claimed invention. Absent such a showing in the prior art, the examiner has impermissibly used the applicants's

teaching to hunt through the prior art for the claimed elements and combined them as claimed. *In re Laskowski*, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989).

The Examiner has use Applicant's teachings to hunt through the prior art for claimed elements and combined them as claimed.

3. The prior art does not teach the problem or its source. The solution to a problem, once know, is often obvious even when the recognition of the problem itself or of the source of the problem is not. In *In re Peehs*, 612 F.2d 1287, 204 USPQ 835 (CCPA 1980), neither the problem nor the source of the problem were know in the art. A patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the "subject matter as a whole" which should always be considered in determining the obviousness of an invention under 35 USC 103.

Applicant's invention addresses a problem not recognized by the prior art. More precisely, present cellular reuse systems do not provide the performance advantages available though multiple base transceiver station transmitting information signals having a common transmission characteristic. Present spatial multiplexing and diversity systems do not provide multiple base transceiver station transmitting information signals having a common transmission characteristic within cellular reuse systems.

The examiner rejected claim 10 under 35USC103(a) as being unpatentable over Hudson as applied to claim 1, and further in view of Roy. Applicants respectfully disagree for the reasons stated above.

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The examiner rejected claims 11-13 under 35USC103(a) as being unpatentable over Hudson as applied to claim 1, and further in view of Schmidt. Applicants respectfully disagree for the reasons stated above.

Claims 2-13 are directly or indirectly dependent on claim 1. Therefore, claims 2-13 are patentable over the prior art.

Claim 14 includes the features of claim 1. Therefore, claim 14 is patentable over the prior art.

Claim 15 includes the features of claim 1. Therefore, claim 15 is patentable over the prior art.

Claims 16-20 are directly or indirectly dependent on claim 15. Therefore, claims 16-20 are patentable over the prior art.

No new matter has been added by these amendments.

The applicants respectfully request reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please AMEND claims 1, 4-7, 14 and 15 as follows:

1. A cellular wireless re-use communication system comprising:
a base transceiver station cluster, the base transceiver station cluster comprising:
a first plurality of base station transceivers; and
a plurality of common channel areas, each common channel area having a unique set of common assigned channels;
each common channel area comprises~~ing~~ at least one subscriber unit, each subscriber unit within the common channel area receiving and recovering information signals from a second plurality of base station transceivers through one of the set of common assigned channels that correspond to the common channel area.
4. The cellular wireless re-use communication system of claim 3[2], wherein the common transmission characteristic is a transmission frequency.
5. The cellular wireless re-use communication system of claim 3[2], wherein the common transmission characteristic is a transmission time.
6. The cellular wireless re-use communication system of claim 3[2], wherein the common transmission characteristic is a transmission code.
7. The cellular wireless re-use communication system of claim 3[2], wherein the common transmission characteristic is at least one of: a frequency-division, a time-division, a spatial-division, a code-division, orthogonal frequency division multiple access (OFDMA), wavelength division multiple access (WDMA), wavelet division multiple access techniques.

14. A cellular wireless re-use communication system comprising:
a plurality of base transceiver station clusters, each base transceiver station cluster comprising:
at least one base station transceiver; and
at least one common channel area, each common channel area having a unique set of common assigned channels;
each common channel area comprises^[ing] at least one subscriber unit, each subscriber unit within the common channel area receiving and recovering information signals from a second plurality of base station transceivers through a one of the set of common assigned channels that correspond to the common channel area.

15. A method of transmitting multiple information signals to at least one subscriber unit within a cellular wireless re-use communication system, the system comprising a base transceiver station cluster, the base transceiver station cluster comprising a first plurality of base station transceivers, and a plurality of common channel areas, each common channel area having a unique set of common assigned channels, each common channel area comprises^[ing] at least one subscriber unit, the method comprising:
a second plurality of base station transceivers transmitting information signals through one of the set of common assigned channels that correspond to the common channel area; and
each subscriber unit within the common channel area receiving and recovering information signals from the second plurality of base station transceivers through the one of the set of common assigned channels that correspond to the common channel area.